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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,746	05/29/2007	Jianmin Shi	RW-185PCT	7117
20311 7590 10/15/2010 LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016				
EXAMINER				
ZHU, WEIPING				
ART UNIT		PAPER NUMBER		
1734				
NOTIFICATION DATE		DELIVERY MODE		
10/15/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

info@lmiplaw.com

### Office Action Summary

**Application No.**

10/583,746

**Applicant(s)**

SHI ET AL.

**Examiner**

WEIPING ZHU

**Art Unit**

1734

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2010 and 13 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-13 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Status of Claims***

1. Claims 10-13 and 16-18 are currently under examination, wherein claim 10 has been amended in applicant's amendments filed on July 28, 2010. The non-elected claims 14 and 15 have been withdrawn by the applicant in the same amendment.

***Status of Previous Rejections***

2. The previous rejections of claims 10-13 and 16-18 as stated in the Office action dated April 13, 2010 are maintained as follows:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over JP 2000-095577 A as stated in the Office action dated April 13, 2010.

With respect to the amended features in claim 10, JP ('577 A) further discloses a process for manufacturing the hydroxylapatite metal composite comprising preparing a powdery mixture of hydroxylapatite and a metallic material; compacting the mixture into a green compact; and discharge-plasma-sintering the green compact under a high pressure and temperature (paragraphs [0022]-[0069] and [0071]-[0075]), which appears to be similar to the process of manufacturing the claimed hydroxylapatite metal composite material as disclosed in the instant specification (page 4). JP ('577 A) does not specify the amended feature of a homogeneous microstructure and a three-dimensional network structure in claim 10. However, it has been well held where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), MPEP 2112.01 [R-3] I. In the instant case, the claimed and JP ('577 A)'s hydroxylapatite metal composite materials are identical or substantially identical in composition and are produced by identical or substantially identical processes as discussed above, therefore a prima facie case of either anticipation or obviousness exists. The same homogeneous microstructure and the same three-dimensional network structure as claimed in the instant claim 10 would be inherent or would be expected in the hydroxylapatite metal composite of JP ('577 A) as in the claimed hydroxylapatite metal composite.

4. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-095577 A as stated in the Office action dated April 13, 2010.

***Response to Arguments***

5. The applicant's arguments filed on July 13, 2010 have been fully considered but they are not persuasive.

The applicant argues that JP ('577 A) does not disclose a hydroxylapatite metal composite material comprised of a metal network which is a homogeneous microstructure and a three-dimensional network structure as claimed in the instant claim 10 because JP ('577 A)'s process of making the hydroxylapatite metal composite material, which is different from the instant process, cannot produce cross-link material and absorb cracks created by the mechanical stress of the material. In response, see the reason for the rejection of the amended features in claim 10 above. The examiner notes that the applicant has not specifically pointed out the differences between the instant and JP ('577 A)'s processes. It appears that the major difference between the two processes is that JP ('577 A) requires a pre-sintering of the hydroxylapatite before mixing it with titanium (paragraphs [0071]-[0075]). However, it is noted that the process of manufacturing the claimed hydroxylapatite metal composite material as disclosed in the instant specification (page 4) does not exclude any pre-treatments of hydroxylapatite or the metallic material. Therefore, the ground of rejection based on the MPEP 2112.01 [R-3] I as stated above is proper and maintained. Furthermore, JP ('577 A) does disclose that the hydroxylapatite and titanium compositized homogeneously and the hydroxylapatite metal composite material produced by the disclosed process does not collapse as the hydroxylapatite metal composite material produced by a comparative process (paragraphs [0095]-[0101]), suggesting JP ('577 A)'s method does

produce a cross-link material having a homogeneous microstructure and absorb cracks created by the mechanical stress of the material, which are contrary to what is asserted by the applicant.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emily Le can be reached on 571-272-0903. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Weiping Zhu/  
Examiner, Art Unit 1734

/EMILY M LE/  
Supervisory Patent Examiner, Art  
Unit 1734

10/4/2010